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(54) MONITORING SYSTEM FOR PERSON TO BE NURSED OR CARED

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a monitoring system for a person to be nursed or cared with which even a person who is not good at operating an appliance or the like or is not accustomed to the operation can intuitively grasp the status of the person to be nursed or the person to be cared.

SOLUTION: This monitoring system for the person to be nursed or cared is equipped with a vital data acquiring means 8 for acquiring vital data of the person to be nursed or cared, a collecting-managing means 50 which collects and manages the vital data acquired by the vital data acquiring means 8, and a displaying means 66 for displaying the status of the person to be nursed or cared based on the collected vital data of the person to be nursed or cared. Then, the monitoring system is also equipped with a display icon storing means 56c which

stores display images being animated, characterized or cartooned which are matched to a plurality of predetermined levels of the vital data for each level, and a level discriminating means 58 which discriminates to which level of a plurality of the levels the collected vital data of the person to be nursed or cared belongs. The display image corresponding to the level discriminated by the level discriminating means 58 is displayed on the displaying means 66.

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CLAIMS

[Claim(s)]

[Claim 1]

The vital data acquisition means for acquiring the vital data of cared and a cared person, The collection management tool which collects the vital data acquired with this vital data acquisition means, and is managed, In the monitoring system of the cared and the cared person having the display means for displaying the situation of cared and a cared person based on the vital data of the collected this cared and the cared person The animation, character-izing, or a display icon storage means to memorize the caricatured display image matched for two or more level of every of the vital data defined beforehand, A level judging means

to judge to which level of two or more of said level the collected vital data of cared and a cared person correspond, Monitoring system of the cared and the cared person characterized by displaying said display image with which the level judged with this level judging means corresponds on said display means.

[Claim 2]

While said vital data include item with two or more another sorts, for said display icon storage means Said display image matched for every combination of two or more level beforehand prepared in item with two or more sorts another each is memorized. Said level judging means Monitoring system of the cared and the cared person according to claim 1 who displays said display image corresponding to the combination of each of said item which judged to which level said two or more level would correspond for every item with two or more sorts another each, and was judged with this level judging means on said display means.

[Claim 3]

Monitoring system of the cared and the cared person according to claim 1 or 2 who reports generating of these abnormalities in the display mode in said display means which was able to be defined beforehand when it has an abnormal-condition judging means to judge whether the vital data of cared and a cared person have reached the abnormal-condition value defined beforehand

and judges with it being unusual with this abnormal-condition judging means.

[Claim 4]

Monitoring system of the cared and the cared person having an abnormal-condition value setting means by which said abnormal-condition value can be set up according to claim 3.

[Claim 5]

While said abnormal-condition value is established for said every item with two or more another sorts It has said contents storage means of management judged that is unusual with the abnormal-condition judging means by which matched more than one with the combination of the item of classification, and the contents of management were registered. Monitoring system of the cared and the cared person according to claim 3 or 4 who displays the contents of a matched-pairs place on this combination at said display means based on the combination of item with two or more another sorts judged that is unusual with said abnormal-condition judging means.

[Claim 6]

Said collection management tool is the monitoring system of the cared and the cared person according to claim 1 to 5 who associates and displays the display image with which it matches with cared and cared person identification information which can specify cared and a cared person, the vital data collected

from said vital data acquisition means are managed, and the level of the vital data of this cared and cared person corresponds based on this cared and cared person identification information with the information that cared and a cared person can be specified.

[Claim 7]

Monitoring system of said cared and cared person according to claim 1 to 6 whom two or more one of the items of classification is the temperature of cared and a cared person, and the color of the skin of said display icon shows the height of temperature.

[Claim 8]

Monitoring system of said cared and cared person according to claim 1 to 7 whom two or more one of the items of classification is a motion of cared and a cared person, and a motion of the hand and foot of said display icon shows the strength of a motion of cared and a cared person.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]

This invention acquires the vital data of cared and a cared person, is displaying the situation of cared and a cared person based on the these-collected vital data of cared and a cared person, and relates to amelioration of the monitoring system of the cared and the cared person who can grasp the situation of cared and a cared person while it collects and manages the this acquired vital data.

[0002]

[Description of the Prior Art]

In recent years, a close-up of these elderly people's nursing problem has been taken with the increment in an elderly population. For this reason, while collecting the vital data acquired and this acquired and managing the vital data of cared and a cared person for the purpose of laborsaving of these elderly-people nursing, the system which can grasp the situation of cared and a cared person by displaying the situation of cared and a cared person based on the these-collected vital data of cared and a cared person has been proposed.

[0003]

[Problem(s) to be Solved by the Invention]

However, although temperature etc. is numerically displayed as the vital data of said collected cared and cared person show displays, such as a monitor, at drawing 9 if it is in these systems Like a service person [in / in that nursing and

care worker of cared and a cared person are poor at performing business using devices, such as a personal computer, **** / a hospital etc.] Devices, such as a computer to which these monitors etc. were rather connected since there were not those that have special knowledge etc. but many common people with a comparatively high age group, have many unfamiliar people. As mentioned above or [that nursing and a care worker cannot grasp that they mean what in the condition of cared and a cared person etc. even if the temperature which is vital data of cared and a cared person is displayed numerically] -- or there was a problem that it may be hard to grasp.

[0004]

This invention was made against the background of the above situation, and he is poor at actuation of a device etc., or it aims at offering the monitoring system of the cared and the cared person who can grasp the situation of cared and a cared person intuitively, even if it is unfamiliar people.

[0005]

[Means for Solving the Problem]

In order to attain the above-mentioned purpose, the monitoring system of the cared and the cared person of this invention The vital data acquisition means for acquiring the vital data of cared and a cared person, The collection management tool which collects the vital data acquired with this vital data acquisition means,

and is managed, In the monitoring system of the cared and the cared person having the display means for displaying the situation of cared and a cared person based on the vital data of the collected this cared and the cared person The animation, character-izing, or a display icon storage means to memorize the caricatured display image matched for two or more level of every of the vital data defined beforehand, It is characterized by displaying said display image with which the level judged with a level judging means to judge to which level of two or more of said level the collected vital data of cared and a cared person correspond, and this level judging means corresponds on said display means.

While the level of the vital data of cared and a cared person is judged, in order to display the display image memorized by said display icon storage means corresponding to the this judged level on said display means according to this description, even if nursing and a care worker are unfamiliar people, he can grasp the situation of cared and a cared person intuitively to a device etc.

[0006]

The monitoring system of the cared and the cared person of this invention While said vital data include item with two or more another sorts, for said display icon storage means Said display image matched for every combination of two or more level beforehand prepared in item with two or more sorts another each is memorized. Said level judging means It is desirable to display said display

image corresponding to the combination of each of said item which judged to which level said two or more level would correspond for every item with two or more sorts another each, and was judged with this level judging means on said display means.

If it does in this way, it can respond, even if the vital data acquired from cared and a cared person are two or more two items or more, and cared and a cared person can grasp the level in each item of these plurality intuitively by viewing the display of said display means.

[0007]

When it has an abnormal-condition judging means to judge whether the vital data of cared and a cared person have reached the abnormal-condition value defined beforehand and judges with it being unusual with this abnormal-condition judging means, as for the monitoring system of the cared and the cared person of this invention, it is desirable that the display mode in said display means which was able to be defined beforehand reports generating of these abnormalities.

If it does in this way, nursing and a care worker can perceive easily that the abnormal condition has occurred in cared and a cared person, and the prompt action of him to cared and a cared person will be attained in it.

[0008]

As for the monitoring system of the cared and the cared person of this invention, it is desirable to have an abnormal-condition value setting means by which said abnormal-condition value can be set up.

If it does in this way, corresponding to condition and individual difference of cared and a cared person, an abnormal-condition value can be changed suitably.

[0009]

The monitoring system of the cared and the cared person of this invention While said abnormal-condition value is established for said every item with two or more another sorts It has said contents storage means of management judged that is unusual with the abnormal-condition judging means by which matched more than one with the combination of the item of classification, and the contents of management were registered. It is desirable to display the contents of a matched-pairs place on this combination at said display means based on the combination of item with two or more another sorts judged that is unusual with said abnormal-condition judging means.

If it does in this way, by the contents of management to an abnormal condition being displayed, it receives unusually [this generating] and exact correspondence can be carried out.

[0010]

As for the monitoring system of the cared and the cared person of this invention,

it is desirable to match said collection management tool with cared and cared person identification information which can specify cared and a cared person, to manage the vital data collected from said vital data acquisition means, and to associate and display the display image with which the level of the vital data of this cared and cared person corresponds with the information that cared and a cared person can be specified, based on this cared and cared person identification information.

If it does in this way, even if cared and a cared person are plurality, the situation for every cared and cared person can be grasped serially.

[0011]

Two or more one of the items of classification is the temperature of cared and a cared person, and said thing [that the color of the skin of said display icon shows the height of temperature] of the monitoring system of the cared and the cared person of this invention is desirable.

If it does in this way, the situation of temperature can be serially grasped as a situation of cared and a cared person.

[0012]

Two or more one of the items of classification is a motion of cared and a cared person, and said thing [that a motion of the hand and foot of said display icon shows the strength of a motion of cared and a cared person] of the monitoring

system of the cared and the cared person of this invention is desirable.

If it does in this way, the situation, and bed leaving/lying in bed of a motion can be serially grasped as a situation of cared and a cared person.

[0013]

[Embodiment of the Invention]

It explains referring to a drawing about the example of this invention. The monitoring system of cared and a cared person in the example of this invention The sensor sheet 8 as the beds 4a and 4b prepared in nursing and a nursing home 4 as shown in drawing 1 , and a vital data acquisition means currently used for 4c--, respectively, The monitor stations 10a and 10b and 10c-- which carry out the detection report of the condition of cared and a cared person installed corresponding to this sensor sheet 8, The personal computer 16 which the report addressee of an abnormality report place who notifies this owns when abnormalities arise in the condition of cared and a cared person, a notebook computer 18, and the information terminal of cellular-phone 20 grade, Said monitor station 10a which is prepared in the nursing station in nursing and a nursing home 4 etc., and is connected, between the management computer 50 which collects each beds 4a and 4b and the vital data of each cared and cared person in 4c--, and is managed, and this management computer 50 and each information terminal of an abnormality report place, it comes out with the

communication circuit network 12 in which data communication is possible, and consists of 10b and 10c--.

[0014]

When the sensor sheet 8 as a vital data acquisition means used for this example is explained, first, in this sensor sheet 8 While two or more pressure detection sensors 6 are embedded in the predetermined location in a sheet The temperature sensor 7 for measuring the temperature of cared and a cared person is formed. Supervisory equipment 10a by which the output signal from the temperature sensor 7 is connected to said pressure detection sensor 6 list in each [these] sensors 6 and 7, 10b and 10c-- digitize the output signal from each [these] sensors 6 and 7 in the A/D-conversion section 9, and this digital data by transmitting to said management computer 50 through the communications department 11 This management computer 50 by the existence of pressure detection and change by said pressure detection sensor 6 with the movement on bed leaving and implantation of cared and a cared person, and a bed Bed leaving and implantation of cared and a cared person, and change of the temperature of cared and a cared person can be grasped now by change of the detection temperature by said temperature sensor 7.

[0015]

Thus, although the pressure detection sensor 6 and the temperature sensor 7

are introduced into the sensor sheet 8 and he is trying to collect motions and temperature of cared and a cared person as vital data of cared and a cared person on it in this example, it may enable it to grasp sweating of cared and a cared person, the existence situation of the incontinencia, etc., as this invention is not limited to this and forms, the sensors, for example, the humidity detection sensor, other than this.

[0016]

Although what cared and a cared person do not memorize sense of incongruity to at the time of implantation is desirable, for example, it is desirable to use the pressure-sensitive conductive rubber from which resistance changes corresponding to a pressure, the pressure detection sensor 6 used for these sensors sheet 8 is not limited to this, and should just choose this invention suitably based on the above-mentioned viewpoint as these pressure detection sensor 6.

[0017]

It is what cared and a cared person do not memorize sense of incongruity to about said temperature sensor 7 at the time of implantation. Moreover, according to the situation of the clothes of cared and a cared person etc. [and] Although it is desirable that that the temperature to acquire differs uses few temperature sensors, and two or more temperature sensors 6 are arranged and

it is made to make the peak price of this temperature sensor into the temperature at the time in this example so that one of temperature sensors may be located directly under cared and the cared person at the time of implantation What is necessary is not to limit this invention to this and just to choose suitably classification, a configuration method, etc. of a sensor which acquire these temperature.

[0018]

In addition, although the signal line connects with the cable and said sensor sheet 8, and monitor stations 10a and 10b and 10c-- transmit the measurement data of pressure detection or temperature through this signal line in this example The signal line which is not limited to this and connected by cared and a cared person doing an impossible motion cuts this invention, or It aims at raising the workability at the time of exchanging by the case where the sensor sheet 8 and a monitor station 10 break down etc. A signal is exchanged as the sensor sheet 8, monitor stations 10a and 10b, and the communication link unit of 10c-- that can radiocommunicate to both sides are prepared.

[0019]

Subsequently, when abnormalities arise in the condition of cared and a cared person, as an information terminal of the report addressee who notifies the appearance of cared and a cared person, a personal computer 16, a notebook

computer 18, and a cellular phone 20 can be used, no matter it may be what terminal, if reception of the information disseminated from said management computer 50 is possible.

[0020]

Moreover, although these report addressee's information terminal and said management computer 50 are connected through the communication line network 12 by this example, it is not limited to this, and said management computer 50, and a personal computer 16, a notebook computer 18 and a cellular phone 20 are connected using a dedicated line, for example, this invention is connected through the Internet network.

[0021]

When the configuration of said management computer 50 which is a collection management tool in this example is explained based on the block diagram of drawing 2, subsequently, a management computer 50 It has the almost same configuration as the usual computer generally used. To a data bus 54 CPU58 as a level judging means and an abnormality judging means, RAM62, the display 66 as a display means, and the storage section 56 as each storage means to mention later, ** is connected with the input section 64, monitor stations 10a and 10b and the communication link substrate 52 connected to 10c--, and the communication line substrate 60 connected with said personal computer 16, a

notebook computer 18, and a cellular phone 20 through the communication line network 12, and it is made and constituted.

[0022]

Moreover, data area 56a for report persons into which a report addressee's telephone number, a mail address, etc. at the time of notifying the appearance of cared and a cared person mentioned later into the storage section 56 were registered, In the sensor sheet 8 list of cared and a cared person, monitor stations 10a and 10b, Vital data storage area 56b vital data collected from 10c--, such as a motion of the body of temperature, and a cared and a cared person, are remembered to be by matching each cared and cared person with identifiable cared and cared person ID, The temperature whose display image (icon) displayed on the display 66 mentioned later is the item of vital data, Display pattern storage region 56c registered into each combination of each level of two items of a motion of the body of cared and a cared person by matching, In contents storage region of management 56d into which the approach of the management in that case etc. is registered when it is judged that it is in the unusual condition which cared and a cared person mention later In each item of a motion of the body of temperature, and a cared and a cared person which is an item of said vital data The level judging processing for judging which level of each item the data at the time are, It consists of

processing program storage regions (illustration abbreviation) where the processing program with which the contents of processing, such as abnormal-condition judging processing in which it judges whether the abnormal-condition value as which the situation of the cared and the cared person at the time was determined beforehand is reached, were described was memorized.

[0023]

As an item of abnormal-condition judging processing of cared [these] and a cared person At this example, abnormal-condition judging processing is made by temperature, the body dead time which is the time amount to which the body does not move, and the body motion duration which is the time amount which is continuing moving conversely. These As opposed to the temperature and time amount which were set up beforehand in sensor sheet 8 list Each monitor station 10a, CPU58 judges whether based on movement data and temperature data which have been transmitted from 10b and 10c--, the appearance of cared and a cared person has reached the abnormal condition defined beforehand.

[0024]

It is transmitted to sensor sheet 8 list from each monitor stations 10a and 10b and 10c--, and come up moreover, movement data and temperature data It matches with cared and cared person ID of each cared and cared person at said

vital data storage area 56b. Record, To which level of the level defined beforehand the movement data managed and these-collected and temperature data correspond The display image which is judged by said CPU58 and agrees about the combination of the level of each this judged item is read from said display pattern storage region 56c, and is displayed on a display 66.

[0025]

If the pattern (put together) of the display image in which the appearance of cared and a cared person registered into said display pattern storage region 56c is shown here is explained based on drawing 3 First, about whether cared and a cared person are males or you are a woman, the face displayed displays according to the sex of each cared and cared person by matching with cared and cared person ID of each cared and cared person beforehand, and registering information, such as sex and age. In addition, in drawing 3 , cared and a cared person are a woman. Moreover, the appearance of cared and a cared person performs the display image displayed on a display 66 by the image using animation.

[0026]

On the leftmost of a display pattern, there is no figure of cared and a cared person, only the bed is displayed, and it is a display image to show signs that this is in the condition which the pressure detection sensor of said sensor sheet

8 has not detected the pressure at all, namely, is in a bed, and cared and a cared person are doing bed leaving in the toilet etc.

[0027]

nursing which is nursing and a care worker in displaying a background color on yellow (the lower right being ***** of **) when having passed over the setup time which bed leaving time amount mentions later in the right-hand side -- it is a display image for urging cautions to a teacher, a care worker, etc. that the inside of nursing and a nursing home 4 is patrolled.

[0028]

Subsequently, the pattern of the display based on the combination of each level of the temperature of cared and a cared person and the magnitude of a motion of the body is shown in nine masses under it. So that it can judge easily visually that these temperature of three masses of the top line is higher than the set-up temperature which the temperature of cared and a cared person mentions later among nine masses in temperature being in a high condition (level) more than 2-degreeC In this example, a display image with which a beige face changes to red (grid pattern in a drawing) gradually, and repeats return and becoming red to steps again in the original flesh color and by which it is indicated by animation is used. Moreover, since a possibility that inflammation may be caused in the body is high [temperature], it displays in written form also that.

[0029]

Three masses of the line of middle serve as temperature (higher one is under 2-degreeC from criterion, and lower one is range under of 1-degreeC) one almost equal to the laying temperature (standard temperature) of cared and a cared person defined beforehand, and when it is in such level, by this example, a display image with a beige face is used so that it can judge visually that it is usual level in temperature easily.

[0030]

Subsequently, in this example, a display image with which a beige face changes to blue (drawing Nakamigi riser slash) gradually, and repeats return and becoming blue to steps again in the original flesh color and which indicates by animation is used so that it can judge easily visually that these temperature is lower than laying temperature in temperature being in a low condition (level) more than 1 - degreeC to three masses of a bottom line. Moreover, since there is a possibility that temperature may be in the shock condition according to a certain cause as a low cause, it displays in written form also that.

[0031]

Moreover, among said nine masses, it is shown in three masses of the train of most left-hand side that a motion of the body on the bed of cared and a cared person is in little level, and by this example, a display image is used for them for

a bedridden image so that it can judge visually that there are few motions of these bodies easily. In addition, since the motion of cared and a cared person is small, it needs to be cautious of a bedsore, and that is displayed in written form.

[0032]

Cared and a cared person show that it is in the level which shows a certain amount of motions (changing sides etc.) to three masses of an inner train, in this example, an arm is mentioned on slant from a level condition, and the display image using animation which repeats return and mentioning to up to slant again in the again level condition is used so that it can judge easily visually that a motion of these bodies is in the usual level.

[0033]

Moreover, the display image using animation which raises a guide peg in this example upward perpendicularly from a level condition so that it can judge easily visually that it is shown that it is in the level with the large motion of the body on the bed of cared and a cared person to 3 of the rightmost train masses, and it is in level with the large motion of these bodies, and repeats return and raising upward again perpendicularly in the again level condition is used. In addition, a motion of cared and a cared person is large, and temperature is higher than laying temperature more than 2-degreeC, or since it may be in agony more than 1-degreeC with a certain pain when low, that is displayed in written form.

[0034]

Moreover, in the screen lower left, if the time amount motion with a motion of cared and a cared person longer than the setup time mentioned later is not detected namely, although the pressure detection sensor has detected the pressure, when the pressure does not change Since it may be judged with dangerous level and cared [its] and cared person may be in a dangerous condition, for example, a heart-and-lungs idle state, a loss-of-consciousness condition, etc., Where an arm is hung down, at this example, the display image with which the color of an arm and a guide peg was made into gray (the bottom of drawing Nakamigi is *****) is used for a complexion list, so that it can judge easily visually. Furthermore, the message it is directed that goes round in order to investigate the appearance of cared and a cared person is displayed.

[0035]

Thus, the situation of cared and a cared person can be intuitively grasped now because nursing and a care worker view these images by displaying the display image applicable to the level which said CPU58 judged in which level temperature and body motion of cared and a cared person would be, and this CPU58 judged on a display 66 even if he is unfamiliar people at a device etc.

[0036]

Moreover, the time amount motion with said CPU58 longer than the abnormal

condition defined beforehand, for example, said setup time defined beforehand, is not detected. When it judges with level with a low temperature continuing and it being an abnormal condition, generating of these abnormalities By reporting to a complexion list by [as the color of an arm and a guide peg displaying the display image made into gray (the bottom of drawing Nakamigi is *****)], where said arm which is a display image corresponding to generating of these abnormal conditions is hung down It can perceive easily that the unusual condition has generated nursing and a care worker in cared and a cared person, and it has become possible. [of the prompt action to cared and a cared person]

[0037]

Thus, although nursing and the care worker of judging and reporting generating of an abnormal condition are desirable from being able to perceive easily that the abnormal condition has occurred in cared and a cared person, and the prompt action to cared and a cared person being attained in it, this invention is good also as a configuration which is not limited to this and does not have the information function of these abnormal occurrences.

[0038]

In addition, the time amount motion longer than the above mentioned setup time as an abnormal condition in this example is not detected. The temperature other than the condition that level with a low temperature continues is higher than

laying temperature more than 2-degreeC. As conditions the case where level with a large body motion continues for a long time than the setup time, when temperature is lower than laying temperature more than 1-degreeC and level with a large body motion continues for a long time than the setup time are judged to be unusual and it is shown in drawing 3 While changing the background color of a display into yellow from the usual white, singing of the buzzer is carried out, and while reporting this abnormal occurrence, the contents of a matched-pairs place are read from the 56d of said contents storage regions of management to these abnormalities, and are displayed on them.

[0039]

Thus, although it is desirable from nursing and a care worker receiving unusually [these generating], and being able to carry out exact correspondence to display a solution, this invention is good also as a configuration which is not limited to this and does not display these solutions.

[0040]

In addition, in this example, although temperature and two items of a body motion are established as said vital data, this invention is not limited to this, is good also considering these vital data only as one, and conversely good also as three or more items.

[0041]

The situation of each cared and cared person actually nursed in nursing and a nursing home 4 by displaying said display pattern explained by drawing 3 on drawing 4 is separately displayed on the display 66. In addition, in this example, match with cared and the cared person ID who can specify each cared and cared person and who are cared and cared person identification information as mentioned above, and the vital data of each cared and cared person are managed. By associating and displaying said display image corresponding to each level of the cared and the cared person based on these vital data by which it is indicated by animation with the identifier which is the information that each cared and cared person can be specified, as shown below Although the situation of two or more cared and cared persons is intelligibly displayed on coincidence, this invention may not be limited to this and the number of cared and cared persons may be one.

[0042]

Although the C man is width on the bed, since the motion of the body is not detected beyond the setup time here, the Fth Mr. son rather than the set-up temperature by high temperature Since a motion of the body is also large, a certain inflammation may be caused, the L child has a temperature lower than the temperature set up, and he has fear of a certain shock disease. With the Mth Mr. son Since the P child has high possibility that it does not return to a bed even

if the unattended time set up passes, but condition is in the dangerous condition here and there [these], While changing the field of the person who may be in the dangerous condition in the display 66 to yellow, he can carry out singing of the buzzer and nursing and a care worker can notice quickly unusually.

[0043]

Moreover, abnormal-condition values which are in an unusual condition for every item of two or more classification, such as magnitude of temperature or a body motion, for example, the case where the laying temperature of temperature is 35-degreeC -- an actual temperature of cared and a cared person -- laying temperature -- 2-degreeC -- the case where it becomes more than high 37-degreeC, and laying temperature -- 1-degreeC -- by the case where it becomes below low 34-degreeC etc. It matches with the combination of said item with two or more another sorts judged that is unusual by CPU58. It has the 56d of the contents storage regions of management where the contents of management to this unusual condition were registered. By reading the contents of a matched-pairs place from the 56d of the contents storage regions of management, and displaying them on this combination at said display 66 based on the combination of item with two or more another sorts from which it judged that the condition of cared and a cared person is unusual by said CPU58 It receives unusually [this generating] and exact correspondence can be carried

out.

[0044]

Moreover, the temperature at the time of normally it becomes the identifier of cared and a cared person, and criteria in this example as shown in drawing 5 , If the part as which a unattended time, a dead time, and body motion duration can be set up now for every cared and cared person, and the name is displayed is chosen For example, if the part of the Ath Mr. son's identifier is chosen, a dialog will newly open and each item will be inputted. Or by choosing "O.K.", if it can set up now and a setup is completed by choosing from a pull down menu, a dialog closes and it is updated by new setup.

[0045]

Thus, although it is desirable from the ability to change the set point suitably corresponding to condition and individual difference of cared and a cared person by having a setting means by which the set points, such as temperature for judging with an abnormal condition, a unattended time, a dead time, and body motion duration, can be set up, this invention is not limited to this and you may make it set up these setup as common to each cared and cared person.

[0046]

When the numeric value of these set-up items and a cared person's [cared and] action differ from a situation, while being judged as an unusual condition and

choosing said each display pattern, it displays on a display 66 and reports to nursing and a care worker.

[0047]

While judging as an unusual condition after the set-up time amount passes about a unattended time, a dead time, and body motion duration in order to judge cared and a cared person as an unusual condition here, by temperature, it is judged that it is unusual by whether it becomes high temperature from the set-up temperature more than 2-degreeC, or it becomes low temperature more than 1-degreeC.

[0048]

in addition -- here -- the temperature of cared and a cared person -- setting temperature -- 2-degreeC -- being high **** -- 1-degreeC -- although judged with abnormalities by the low thing, this invention is not limited to this and can be suitably set up about the value judged to be abnormalities.

[0049]

Moreover, in drawing 6 , if the situation in the time of selected cared and cared person being chosen is displayed, for example, the Bth Mr. son's frame is chosen by choosing within the limit as which cared and a cared person are displayed, in a display 66, a window will newly open and Bth present Mr. son's of the appearance will be displayed.

[0050]

here, it can check now that the Bth [which is cared and a cared person] Mr. son's current appearance is shown, it is reported that the dead time of most the latest [duration / of most the latest / temperature / body motion] is 25 minutes at 1 minute, it bears a strong resemblance to a situation by 35.8-degreeC, and it is normal.

[0051]

However, since there are few body motions, an indication is given to a bedsore so that it may be careful.

[0052]

Moreover, the measured graph which displays the transition for every vital data as shown in drawing 7 is displayed by choosing the "graphical representation" prepared in the lower part of the window matched cared and the cared person ID who identifies cared and a cared person, and cared and a cared person for the measured vital data with vital data storage area 56b of said storage section 56, and memorized, and it was [the window] open by said drawing 6 .

[0053]

In drawing 7 , the graph which displays transition of temperature among the measured vital data is displayed, and transition of the temperature from 0:00 on May 5, 2002 of the Ath [which is cared and a cared person] Mr. son to 6:00 is

displayed here. Seeing this graph can also know now the appearance of cared and a cared person. This graph serves as data of data format whose display is attained also with a cellular phone, of course in personal computers, such as a management computer 50.

[0054]

Thus, CPU58 is matched with cared and the cared person ID who can specify cared and a cared person. Temperature and body motion of the cared and the cared person who collected from said sensor sheet 8 are managed. Based on this cared and cared person ID, the graph shown in drawing 7 as a display image with which the temperature of this cared and cared person and the level of a body motion correspond. By relating and enabling it to display on a display 66 with the identifier of cared and a cared person, and cared and a cared person ID, even if cared and a cared person are plurality, the situation for every cared and cared person can be grasped serially.

[0055]

Moreover, the personal computer 16 possessed [family / of the cared and the cared person who is said report addressee in this example], To distribute to a notebook computer 18 and a cellular phone 20 by the ability also distributing now condition and said vital data of cared and a cared person. By choosing "distribution" prepared in the lower part of the window it was [the window] open

by said drawing 6 To the mail address registered by matching with the data of cared and a cared person The case where distributed the appearance of cared and a cared person to the report place from the communication line substrate 60 for report place information terminals based on the data-processing operation of CPU58, and it distributes to a cellular phone 20 here as shown in drawing 8 is explained.

[0056]

While distributing the condition of the Bth Mr. son who explained by said drawing 6 to drawing 8 , the graph which displays transition of the temperature of the Bth Mr. son who explained by said drawing 7 by choosing the "temperature graphical representation" of a bottom of screen is displayed on a screen.

[0057]

In addition, this invention is not limited to this, and when judged with the dangerous condition that cared and a cared person described above for example, you may make it transmit the purport which is in a dangerous condition automatically from said management computer 50, although it distributes in this example only when "distribution" is chosen by drawing 6 .

[0058]

Or you may make it distribute the appearance of cared and a cared person to said report addressee periodically at the time of day decided several times on

the 1st.

[0059]

Moreover, when the information on to that effect is notified to said report addressee by the case where cared and a cared person are in a dangerous condition, reply mail can be transmitted to a management computer 50 in the fixed form sentence of "it goes urgently", "going after contacting a family", etc.

[0060]

As explained above, the monitoring system of the cared and the cared person of this example The sensor sheet 8 for acquiring the temperature and the body motion which are vital data of cared and a cared person, CPU58 which collects the temperature and the body motions which were acquired with this sensor sheet 8, and is managed, In the monitoring system of the cared and the cared person having the display 66 for displaying the situation of cared and a cared person based on temperature and body motion of the collected this cared and the cared person Display pattern storage region 56c which memorizes the display image matched for two or more level of every of the temperature defined beforehand or a body motion, CPU58 as a level judging means to judge to which level of said two or more level temperature and body motion of the collected cared and the cared person correspond, The animation to which the level judged with this level judging means corresponds, character-izing, or the caricatured

display image by displaying on said display 66 While the level of the temperature of cared and a cared person or the condition of a body motion is judged In order to display said display image memorized by said display pattern storage region 56c corresponding to the judged this level on said display 66, even if nursing and a care worker are unfamiliar people, he can grasp the situation of cared and a cared person intuitively to a device etc.

[0061]

As mentioned above, although the drawing has explained the example of this invention, a concrete configuration is not restricted to these examples, and even if there are modification and the addition in the range which does not deviate from the summary of this invention, it is included in this invention.

[0062]

For example, it is also possible to distribute them to the report addressee who attaches a sound-collecting microphone, the CCD camera for a monitor, etc. near a bed, incorporates image data and voice data of cared and a cared person, and wishes although the monitor stations 10a and 10b and 10c-- which were applied in said example had taken in the vital data of cared and a cared person from the communication link substrate 52 of a management computer 50. In this case, when an unusual condition is detected, you may make it a sound-collecting microphone, the CCD camera for a monitor, etc. start.

[0063]

Moreover, it is also possible to protect [encipher / so that all the detail data about cared and a cared person will be managed with a management computer 50 and data may not be stolen by the external invader / data].

[0064]

Moreover, although supervised in said example by the monitor stations 10a and 10b connected from the management computer 50 into nursing and a nursing home 4, and 10c-- The old-man nursing home which this invention is not limited to this and has nursing and a nursing home 4, and a tie-up relation, In the case where it connects through said communication line network 12, you may make it manage the appearance of cared and a cared person, and a doctor is not in said old-man nursing home If you may make it dispatch a medical practitioner to this old-man nursing home and it does in this way after checking situation and condition of cared and a cared person in nursing and a nursing home 4 Since it can go to a therapy after a medical practitioner checks that, also when the condition of cared and a cared person changes suddenly, it becomes possible to perform suitable treatment to cared and a cared person.

[0065]

Moreover, although it is temperature and a body motion, this invention is not limited to this and you may make it apply a sweat rate, a heart rate, a respiration

rate, etc. to an item as an item of two or more classification in said example.

[0066]

In addition, in said example, although it is desirable from choosing the display mode according to the level of each item by the item (temperature and body motion) of two or more classification, displaying on a display 66, and being able to display two or more items now by one display 66 by this, this invention is not limited to this and displays on a display 66 only according to a single item.

[0067]

Moreover, although displayed in said example by the color and behavior which display the abnormal condition of cared and a cared person on a display 66, this invention is not limited to this and you may make it display this in written form.

[0068]

Moreover, in said example, although temperature, a unattended time, a dead time, and body motion duration can be suitably set up corresponding to condition and individual difference of cared and a cared person, it is not limited to this, and the numeric value of each item is together put beforehand only in inputting sex, age, etc., for example, this invention can be set up.

[0069]

Moreover, although the contents of management are read from the 56d of the contents storage regions of management and exact correspondence can be

carried out in said example when said unusual condition is detected by cared and the cared person, this invention is not limited to this and may have the composition that the contents of management are not displayed.

[0070]

Moreover, this invention is not limited to this, in said example, graphical representation of the information collected from the sensor sheet 8 is carried out, and it is serially grasped in order to grasp the situation for every cared and cared person to a display 66, but it is good also as a configuration which does not create a graph etc., and if it does in this way, the processing load of a management computer 50 will come to be mitigated.

[0071]

[Effect of the Invention]

According to this invention, the following effectiveness is acquired.

(a) While the level of the vital data of cared and a cared person is judged, in order to display the display image memorized by said display icon storage means corresponding to the this judged level on said display means according to invention according to claim 1, even if nursing and a care worker are unfamiliar people, he can grasp the situation of cared and a cared person intuitively to a device etc.

[0072]

(b) According to invention according to claim 2, it can respond, even if the vital data acquired from cared and a cared person are two or more two items or more, and cared and a cared person can grasp the level in each item of these plurality intuitively by viewing the display of said display means.

[0073]

(c) According to invention according to claim 3, nursing and a care worker can perceive easily that the abnormal condition has occurred in cared and a cared person, and the prompt action of him to cared and a cared person is attained in it.

[0074]

(d) According to invention according to claim 4, corresponding to condition and individual difference of cared and a cared person, an abnormal-condition value can be changed suitably.

[0075]

(e) According to invention according to claim 5, by the contents of management to an abnormal condition being displayed, it receives unusually [this generating] and exact correspondence can be carried out.

[0076]

(f) According to invention according to claim 6, even if cared and a cared person are plurality, the situation for every cared and cared person can be grasped serially.

[0077]

(g) According to invention according to claim 7, the situation of temperature can be serially grasped as a situation of cared and a cared person.

[0078]

(h) According to invention according to claim 8, the situation, and bed leaving/lying in bed of a motion can be serially grasped as a situation of cared and a cared person.

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram of the monitoring system in the example of this invention.

[Drawing 2] It is the block diagram of the management equipment used by this example.

[Drawing 3] It is drawing where the pattern displayed on the display 66 used by this example is displayed.

[Drawing 4] In this example, it is drawing having shown signs that monitoring system was actually employed.

[Drawing 5] In this example, it is drawing showing signs that two or more items can be set up now for every cared and cared person.

[Drawing 6] In this example, it is drawing showing signs that the current appearance (condition) of cared and a cared person is displayed.

[Drawing 7] In this example, it is drawing which carried out graphical representation of the transition of the temperature of cared and a cared person.

[Drawing 8] In this example, it is drawing showing signs that the appearance of cared and a cared person is distributed to the cellular phone of those who receive a report.

[Drawing 9] It is drawing showing the example of a display in the conventional monitoring system.

[Description of Notations]

4 Nursing and Nursing Home

4a, 4b, 4c Bed

6 Pressure Detection Sensor

7 Temperature Sensor

8 Sensor Sheet

9 A/D-Conversion Section

10a-10c Monitor station

11 Communications Department

12 Communication Line Network

16 Personal Computer

18 Notebook Computer

20 Cellular Phone

50 Management Computer

52 Communication Link Substrate

54 Data Bus

56 Storage Section

56a The data storage area for report persons

56b Vital data storage area

56c Display pattern storage region

56d The contents storage region of management

58 Arithmetic and Program Control (CPU)

60 Communication Line Substrate

62 RAM

64 Input Section

66 Display